Exploring Aeronautics			
2006 Mathematics			
Grade Level Expectations			
Delaware Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Airplane Control(209-256)	DE	MA.5. 3.3.3	Use measuring tools to find the size of turn angles in degrees
Airplane Control(209-256)	DE	MA.5. 3.3.4	Draw benchmark turn angles (30, 45, 60, 90, 180 degrees)
Science of Flight	DE	MA.5. 2.2.1	Model problem situations with objects and use representations such as graphs, tables or equations to draw conclusion
Science of Flight	DE	MA.5. 4.1.1	Pose questions that can be answered with data; systematically collect and organize categorical and numerical/ measurement data
Integrating with Aeronautics	DE	MA.5. 1.1.9	Develop the meaning of percent as a ratio of a number out of 100
Integrating with Aeronautics	DE	MA.5. 1.2.6	Develop and use strategies to estimate the results of operations on whole numbers
Integrating with Aeronautics	DE	MA.5. 1.2.14	Select and use appropriate methods and tools for computing (e.g., mental computation, estimation, calculators, paper and pencil) depending on the context and nature of the computation
Integrating with Aeronautics	DE	MA.5. 2.2.1	Model problem situations with objects and use representations such as graphs, tables or equations to draw conclusion
Integrating with Aeronautics	DE	MA.5. 2.3.1	Use equations to express mathematical relationships
Scientific Method(124-144)	DE	MA.5. 2.2.1	Model problem situations with objects and use representations such as graphs, tables or equations to draw conclusion
Scientific Method(124-144)	DE	MA.5. 4.1.1	Pose questions that can be answered with data; systematically collect and organize categorical and numerical/ measurement data
Scientific Method(124-144)	DE	MA.5. 4.3.2	Find and use measures of center (mean, median, mode) and spread (range) to summarize and interpret data
Exploring Aeronautics			
2006 Mathematics			
Grade Level Expectations			
Delaware Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Wings(177-208)	DE	MA.6. 3.3.2	Demonstrate an understanding that the perimeters of rectangles with a fixed area can vary
Wings(177-208)	DE	MA.6. 3.3.3	Demonstrate an understanding that the areas of rectangles with a fixed perimeter can vary

Airplane Control(209-256)	DE	MA.6. 3.2.1	Measure angles and sides to demonstrate that transformations such as reflections (flips), translations (slides), and rotations (turns) maintain congruence
The Resource Center	DE	MA.6. 1.1.1	Expand understanding of the number system to include numbers in the millions
Science of Flight	DE	MA.6. 4.1.1	Collect and organize numerical (whole number or decimal) data in order to answer a question
Science of Flight	DE	MA.6. 4.3.1	Defend conclusions drawn from the interpretation of data by comparing one data set to another
Integrating with Aeronautics	DE	MA.6. 1.2.2	Multiply fractions by other fractions using physical models, ratio/rate tables, and arrays
Integrating with Aeronautics	DE	MA.6. 1.2.9	Describe in which situations an estimate is preferable and in which situations the exact answer is required
Integrating with Aeronautics	DE	MA.6. 1.2.10	Select and use appropriate methods and tools for computing (e.g., mental computation, estimation, calculators, paper, and pencil) depending on the context and nature of the computation
Integrating with Aeronautics	DE	MA.6. 2.1.1	Use an expression or rule to describe patterns of change in numeric and geometric patterns
Integrating with Aeronautics	DE	MA.6. 2.2.1	Demonstrate that a given situation may be represented by a table, graph or equation
Scientific Method(124-144)	DE	MA.6. 4.1.1	Collect and organize numerical (whole number or decimal) data in order to answer a question
Scientific Method(124-144)	DE	MA.6. 4.2.1	Construct displays of data (e.g., circle graphs, scatter plots, frequency counts) for a single data set
Scientific Method(124-144)	DE	MA.6. 4.3.1	Defend conclusions drawn from the interpretation of data by comparing one data set to another
Exploring Aeronautics			
2006 Mathematics			
Grade Level Expectations			
Delaware Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
The Resource Center	DE	MA.7.1.1.5	Compare fractions, decimals, and percents using multiple models
The Resource Center	DE	MA.7.1.1.7	Number sense. Compare integers on the number line
Science of Flight	DE	MA.7.4.1.1	Pose questions that can be answered by collecting and organizing data from experiments, surveys, and relevant print and electronic resources
Science of Flight	DE	MA.7.4.3.1	Defend or dispute conclusions drawn from the interpretation of data by comparing one data set to another

Integrating with Aeronautics	DE	MA.7.1.1.7	Number sense. Compare integers on the number line
Integrating with Aeronautics	DE	MA.7.1.2.5	Use ratios, proportions and percents to solve contextualized problems
Integrating with Aeronautics	DE	MA.7.1.2.9	Select and use appropriate methods and tools for computing (e.g., mental computation, estimation, calculators, paper and pencil) depending on the context and nature of the computation
Integrating with Aeronautics	DE	MA.7.2.2.1	Connect different representations of the same situation to one another using tables, graphs, and rules
Scientific Method(124-144)	DE	MA.7.4.1.1	Pose questions that can be answered by collecting and organizing data from experiments, surveys, and relevant print and electronic resources
Scientific Method(124-144)	DE	MA.7.4.2.1	Construct displays of data for single data sets (e.g., stem-and-leaf plots) or in order to study the relationship between related data sets (scatter plots)
Scientific Method(124-144)	DE	MA.7.4.3.1	Defend or dispute conclusions drawn from the interpretation of data by comparing one data set to another
Scientific Method(124-144)	DE	MA.7.4.3.2	Choose an appropriate measures of center (mean, median, mode) and spread (range) to interpret data set(s)
Exploring Aeronautics			
2006 Mathematics			
Grade Level Expectations			
Delaware Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Tools of Aeronautics(257-326)	DE	MA.8. 4.4.1	Compare and make predictions based on theoretical and experimental probabilities, using sample data generated through actual experiments or computer simulations
Science of Flight	DE	MA.8. 4.1.1	Pose questions that can be answered by collecting and organizing data from experiments, surveys, and relevant print and electronic resources
Science of Flight	DE	MA.8. 4.4.1	Compare and make predictions based on theoretical and experimental probabilities, using sample data generated through actual experiments or computer simulations
Science of Flight	DE	MA.8. 4.4.3	Investigate and describe the difference between the event experimental probability of a simulated event (experiment) and the theoretical probability of the same event
Integrating with Aeronautics	DE	MA.8. 2.1.3	Compare the rates of change in tables and graphs and classify them as linear or nonlinear

Integrating with Aeronautics	DE	MA.8. 2.1.5	Use an algebraic expression to represent any term in a numeric or geometric pattern
Integrating with Aeronautics	DE	MA.8. 2.2.1	Write an equation given the tabular or graphic form of a linear problem
Integrating with Aeronautics	DE	MA.8. 2.2.4	Use tables, graphs and symbolic reasoning to identify functions as linear or nonlinear
Integrating with Aeronautics	DE	MA.8. 3.2.3	Use the Pythagorean Theorem to find missing sides of right triangles
Scientific Method(124-144)	DE	MA.8. 4.1.2	Use random sampling methods to collect the necessary information to answer questions
Scientific Method(124-144)	DE	MA.8. 4.2.1	Construct displays of data to represent individual sets of data (e.g., histograms, box plots) or to explore the relationship between related sets of data (scatter plots, line graphs); describe the correspondence between data sets and their graphical displays
Scientific Method(124-144)	DE	MA.8. 4.3.3	Find and use appropriate measures of center (mean, media, mode) and spread (range, interquartile range) to interpret data